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JUN 25 2007
PATENT & TRADEMARK OFFICE

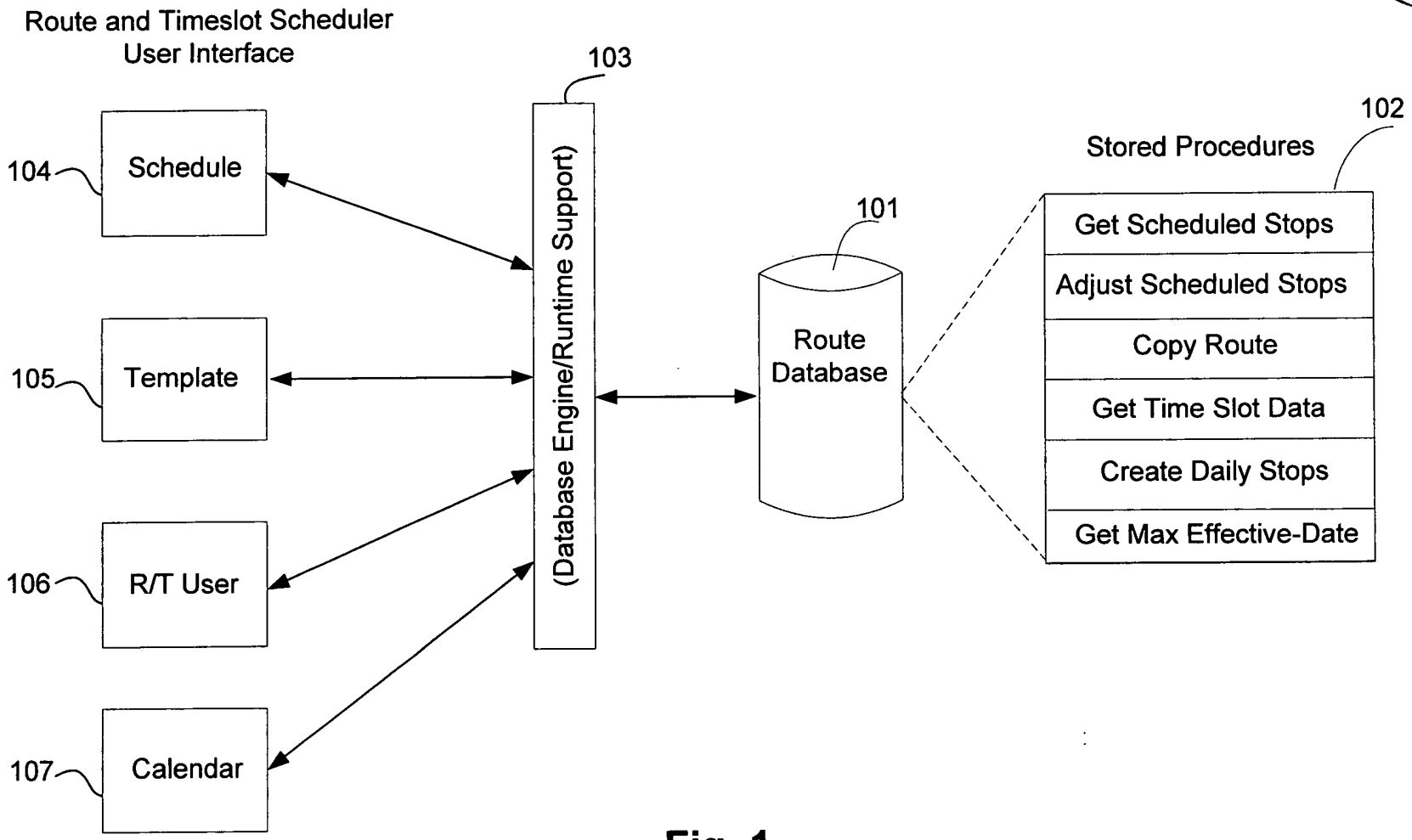

Fig. 1

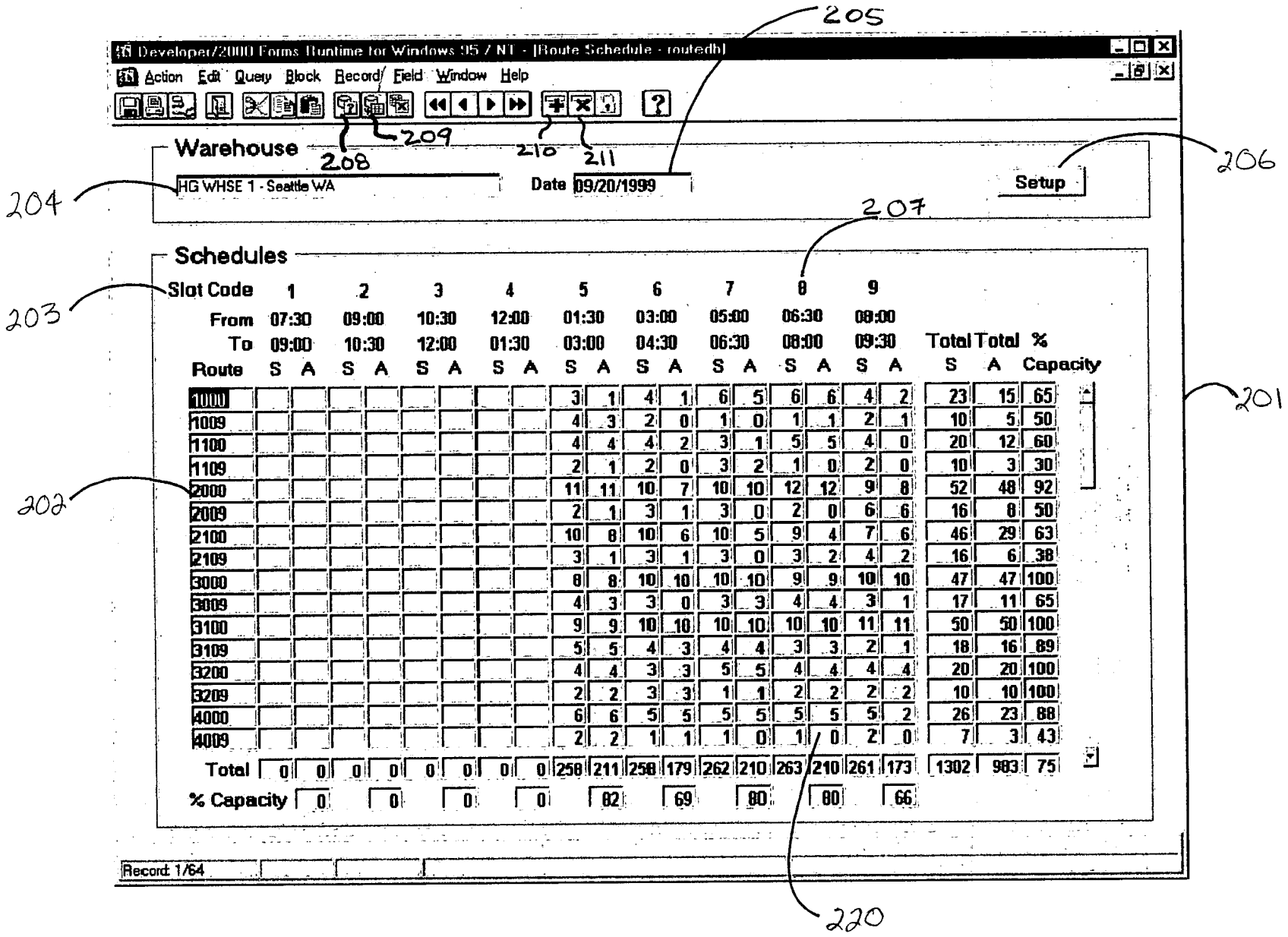
Developer/2000 Forms Runtime for Windows 95 / NT - [Route Schedule - routedbl]
Action Edit Query Block Record Field Window Help
Warehouse
HG WHSE 1 - Seattle WA
Date 09/20/1999
Setup
Schedules
Slot Code 1 2 3 4 5 6 7 8 9
From 07:30 09:00 10:30 12:00 01:30 03:00 05:00 06:30 08:00
To 09:00 10:30 12:00 01:30 03:00 04:30 06:30 08:00 09:30
Route S A S A S A S A S A S A S A S A S A
1000 3 1 4 1 6 5 6 6 4 2
1009 4 3 2 0 1 0 1 1 2 1
1100 4 4 4 2 3 1 5 5 4 0
1109 2 1 2 0 3 2 1 0 2 0
2000 11 11 10 7 10 10 12 12 9 8
2009 2 1 3 1 3 0 2 0 6 6
2100 10 8 10 6 10 5 9 4 7 6
2109 3 1 3 1 3 0 3 2 4 2
3000 8 8 10 10 10 10 9 9 10 10
3009 4 3 3 0 3 3 4 4 3 1
3100 9 9 10 10 10 10 10 10 11 11
3109 5 5 4 3 4 4 3 3 2 1
3200 4 4 3 3 5 5 4 4 4 4
3209 2 2 3 3 1 1 2 2 2 2
4000 6 6 5 5 5 5 5 5 5 2
4009 2 2 1 1 1 0 1 0 2 0
Total 0 0 0 0 0 0 0 0 258 211 258 179 262 210 263 210 261 173
% Capacity 0 0 0 0 82 69 80 80 66
Total S Total A Total % Capacity
23 15 65
10 5 50
20 12 60
10 3 30
52 48 92
16 8 50
46 29 63
16 6 38
47 47 100
17 11 65
50 50 100
18 16 89
20 20 100
10 10 100
26 23 88
7 3 43
1302 983 75
Record: 1/64
201
202
203
204
205
206
207
208
209
210
211
220

FIG. 2

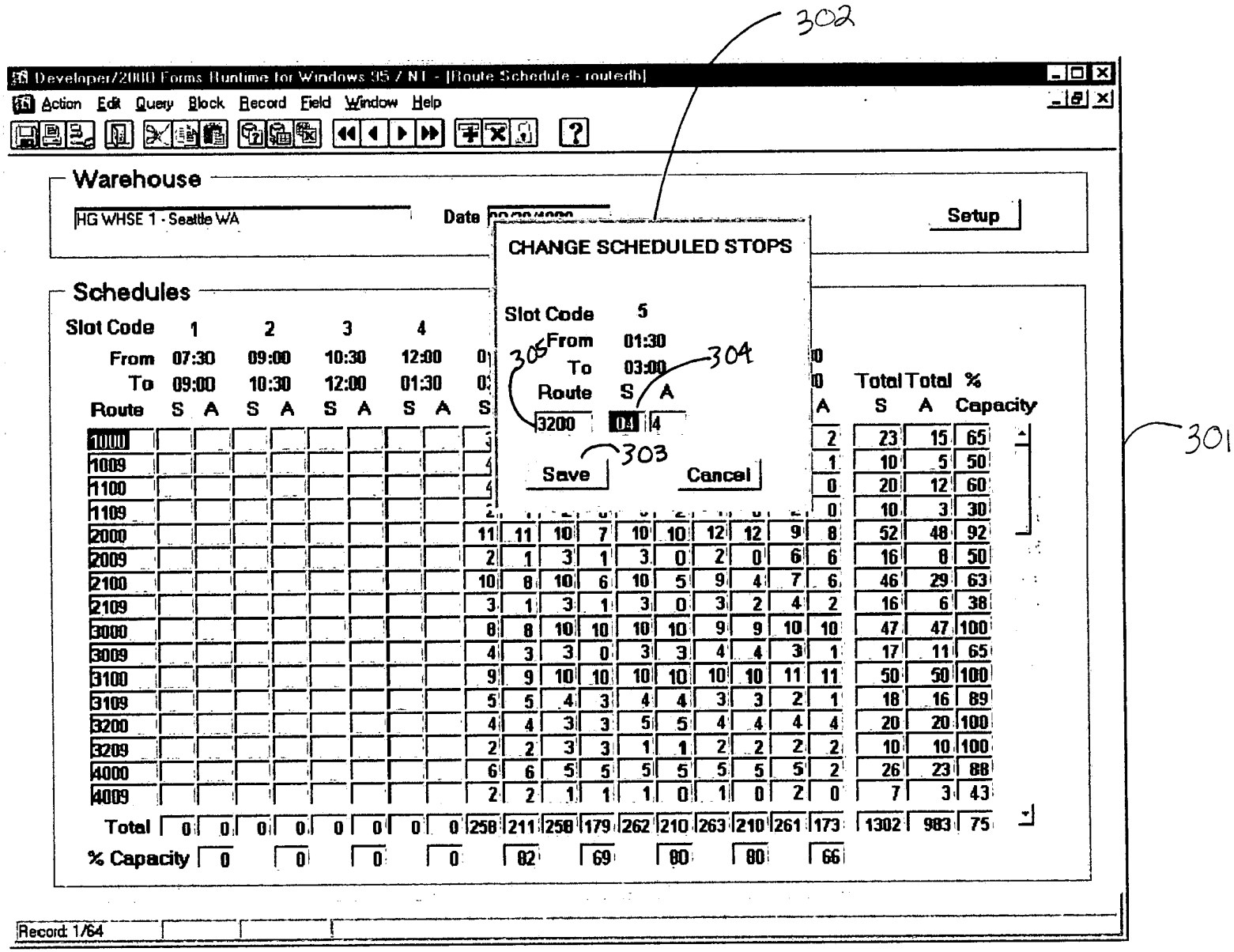
302
Developer/2000 Forms Runtime for Windows 95 / NT - [Route Schedule - routedh]
Action Edit Query Block Record Field Window Help
Warehouse
HG WHSE 1 - Seattle WA
Date
Setup
CHANGE SCHEDULED STOPS
Slot Code 5
From 01:30
To 03:00
Route S A
3200 04 4
Save
Cancel
305
304
303
Schedules
Slot Code 1 2 3 4
From 07:30 09:00 10:30 12:00
To 09:00 10:30 12:00 01:30
Route S A S A S A S A S
Total Total % Capacity
S A
1000 23 15 65
1009 10 5 50
1100 20 12 60
1109 10 3 30
2000 11 11 10 7 10 10 12 12 9 8 52 48 92
2009 2 1 3 1 3 0 2 0 6 6 16 8 50
2100 10 8 10 6 10 5 9 4 7 6 46 29 63
2109 3 1 3 1 3 0 3 2 4 2 16 6 38
3000 8 8 10 10 10 10 9 9 10 10 47 47 100
3009 4 3 3 0 3 3 4 4 3 1 17 11 65
3100 9 9 10 10 10 10 10 10 11 11 50 50 100
3109 5 5 4 3 4 4 3 3 2 1 18 16 89
3200 4 4 3 3 5 5 4 4 4 4 20 20 100
3209 2 2 3 3 1 1 2 2 2 2 10 10 100
4000 6 6 5 5 5 5 5 5 5 2 26 23 88
4009 2 2 1 1 1 0 1 0 2 0 7 3 43
Total 0 0 0 0 0 0 0 0 258 211 258 179 262 210 263 210 261 173 1302 983 75
% Capacity 0 0 0 0 82 69 80 80 66
Record: 1/64
301

FIG. 3

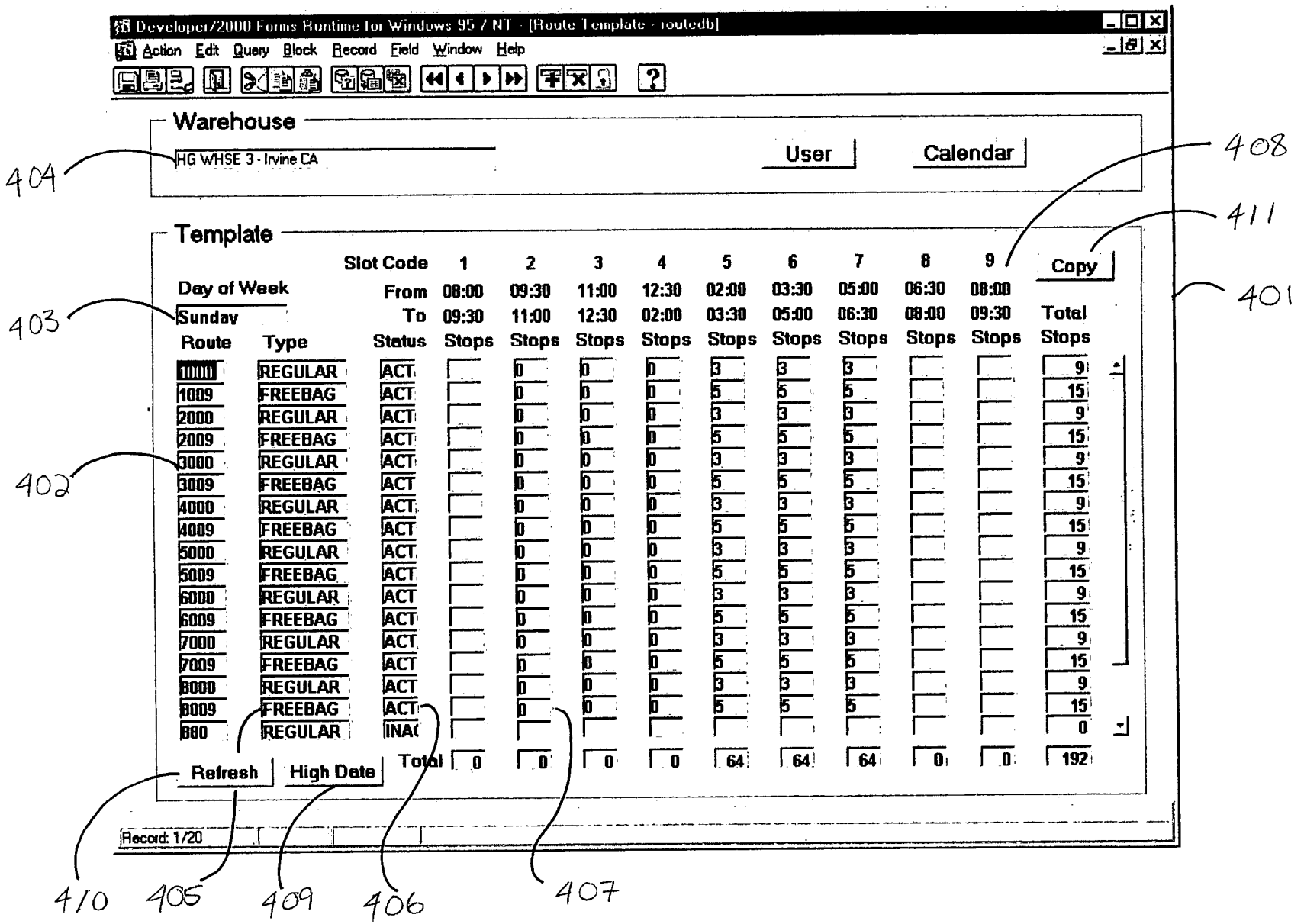
Developer/2000 Forms Runtime for Windows 95 / NT - [Route Template - routedb]
Action Edit Query Block Record Field Window Help
Warehouse
HG WHSE 3 - Irvine CA
User
Calendar
Template
Slot Code 1 2 3 4 5 6 7 8 9
Copy
Day of Week
From 08:00 09:30 11:00 12:30 02:00 03:30 05:00 06:30 08:00
Sunday
To 09:30 11:00 12:30 02:00 03:30 05:00 06:30 08:00 09:30
Route Type Status Stops Stops Stops Stops Stops Stops Stops Stops Stops Total Stops
1000 REGULAR ACT 0 0 0 3 3 3 9
1009 FREEBAG ACT 0 0 0 5 5 5 15
2000 REGULAR ACT 0 0 0 3 3 3 9
2009 FREEBAG ACT 0 0 0 5 5 5 15
3000 REGULAR ACT 0 0 0 3 3 3 9
3009 FREEBAG ACT 0 0 0 5 5 5 15
4000 REGULAR ACT 0 0 0 3 3 3 9
4009 FREEBAG ACT 0 0 0 5 5 5 15
5000 REGULAR ACT 0 0 0 3 3 3 9
5009 FREEBAG ACT 0 0 0 5 5 5 15
6000 REGULAR ACT 0 0 0 3 3 3 9
6009 FREEBAG ACT 0 0 0 5 5 5 15
7000 REGULAR ACT 0 0 0 3 3 3 9
7009 FREEBAG ACT 0 0 0 5 5 5 15
8000 REGULAR ACT 0 0 0 3 3 3 9
8009 FREEBAG ACT 0 0 0 5 5 5 15
880 REGULAR INA 0
Refresh
High Date
Total 0 0 0 0 64 64 64 0 0 192
Record: 1/20
404
408
411
401
403
402
410
405
409
406
407

FIG. 4

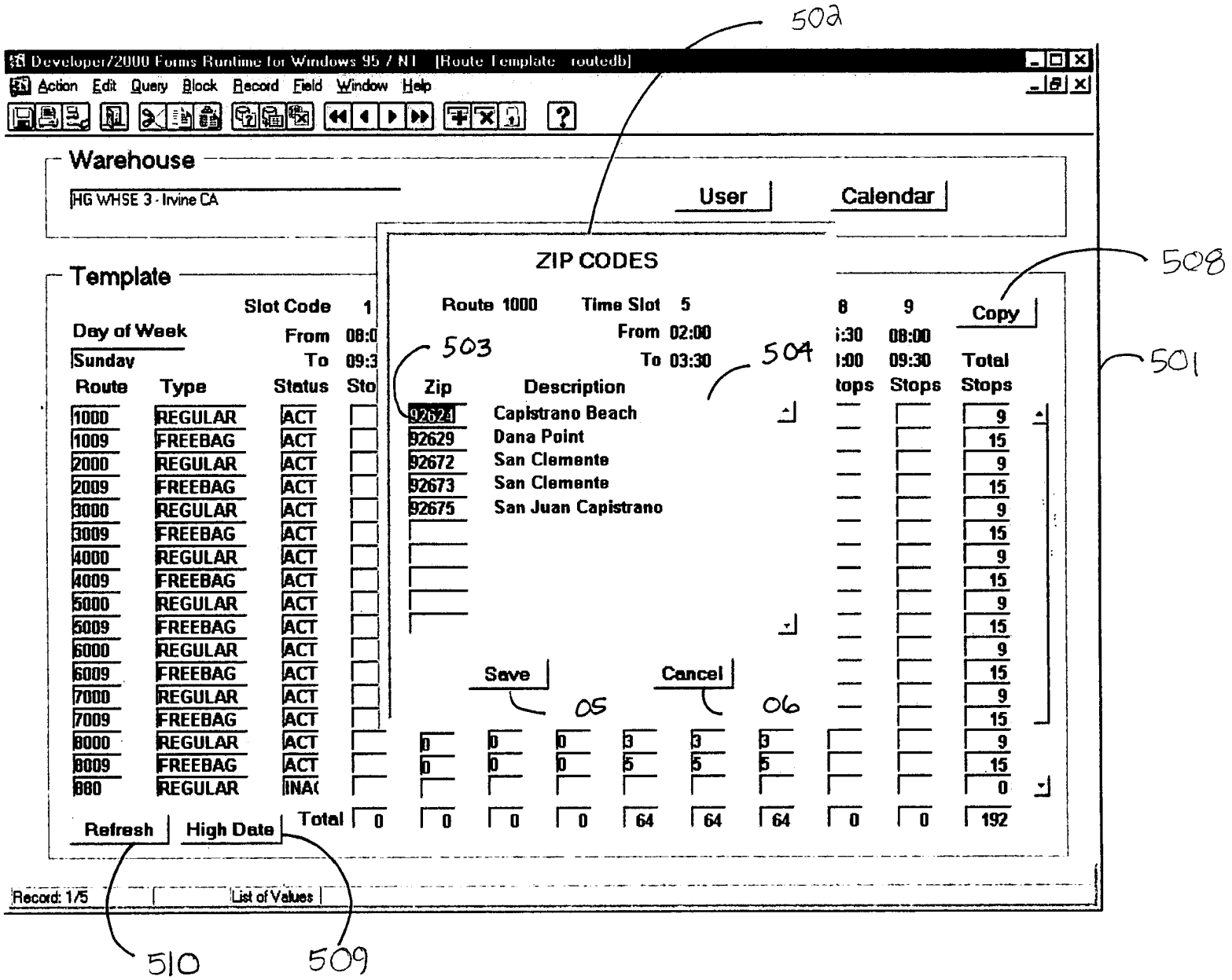
Developer/2000 Forms Runtime for Windows 95 / NT [Route Template routedb]
Action Edit Query Block Record Field Window Help
Warehouse
HG WHSE 3 - Irvine CA
User
Calendar
Template
Slot Code 1
Day of Week
Sunday
From 08:0
To 09:3
Route Type Status Sto
1000 REGULAR ACT
1009 FREEBAG ACT
2000 REGULAR ACT
2009 FREEBAG ACT
3000 REGULAR ACT
3009 FREEBAG ACT
4000 REGULAR ACT
4009 FREEBAG ACT
5000 REGULAR ACT
5009 FREEBAG ACT
6000 REGULAR ACT
6009 FREEBAG ACT
7000 REGULAR ACT
7009 FREEBAG ACT
8000 REGULAR ACT
8009 FREEBAG ACT
880 REGULAR INA
Total 0 0 0 0 64 64 64 0 0 192
Refresh
High Date
ZIP CODES
Route 1000 Time Slot 5
From 02:00
To 03:30
Zip Description
92624 Capistrano Beach
92629 Dana Point
92672 San Clemente
92673 San Clemente
92675 San Juan Capistrano
Save
Cancel
8 9
:30 08:00
:00 09:30
tops Stops Total Stops
Copy
Record: 1/5
List of Values
502
503
504
505
506
508
501
510
509

FIG. 5

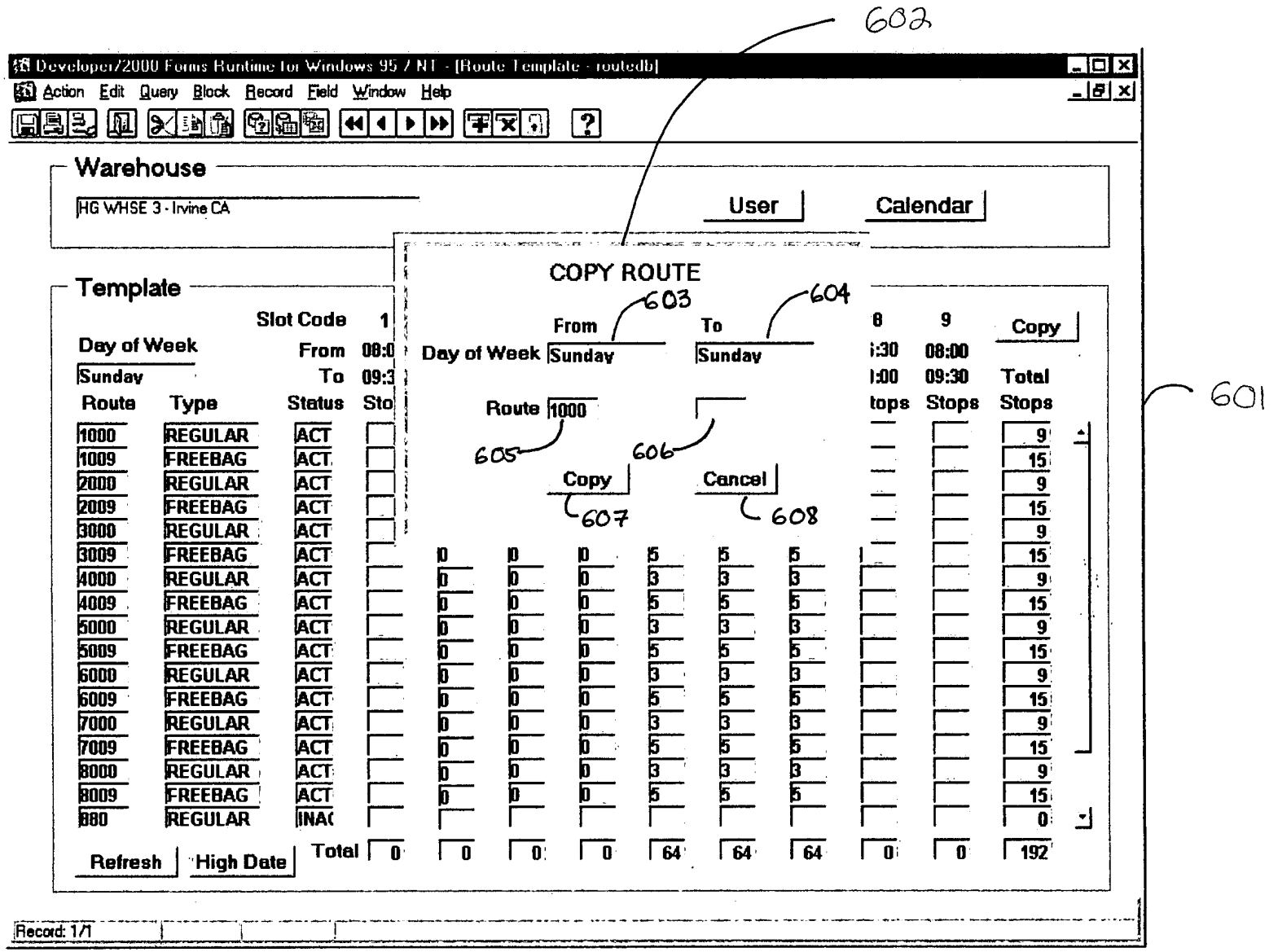
602
Developer/2000 Forms Runtime for Windows 95 / NT - [Route Template - routedb]
Action Edit Query Block Record Field Window Help
Warehouse
HG WHSE 3 - Irvine CA
User
Calendar
Template
Slot Code 1
Day of Week
Sunday
From 08:0
To 09:3
Route Type Status Sto
1000 REGULAR ACT
1009 FREEBAG ACT
2000 REGULAR ACT
2009 FREEBAG ACT
3000 REGULAR ACT
3009 FREEBAG ACT
4000 REGULAR ACT
4009 FREEBAG ACT
5000 REGULAR ACT
5009 FREEBAG ACT
6000 REGULAR ACT
6009 FREEBAG ACT
7000 REGULAR ACT
7009 FREEBAG ACT
8000 REGULAR ACT
8009 FREEBAG ACT
880 REGULAR INAC
Refresh
High Date
Total 0 0 0 0 64 64 64 0 0 192
COPY ROUTE
603
604
From
To
Day of Week Sunday Sunday
Route 1000
605
606
Copy
Cancel
607
608
8 9 Copy
:30 08:00
:00 09:30 Total
tops Stops Stops
0 0 0 5 5 5 9
0 0 0 3 3 3 15
0 0 0 5 5 5 9
0 0 0 3 3 3 15
0 0 0 5 5 5 9
0 0 0 3 3 3 15
0 0 0 5 5 5 9
0 0 0 3 3 3 15
0 0 0 5 5 5 9
0 0 0 3 3 3 15
0 0 0 5 5 5 9
0 0 0 3 3 3 15
0 0 0 5 5 5 9
0 0 0 5 5 5 15
0
601
Record: 1/1

FIG. 6

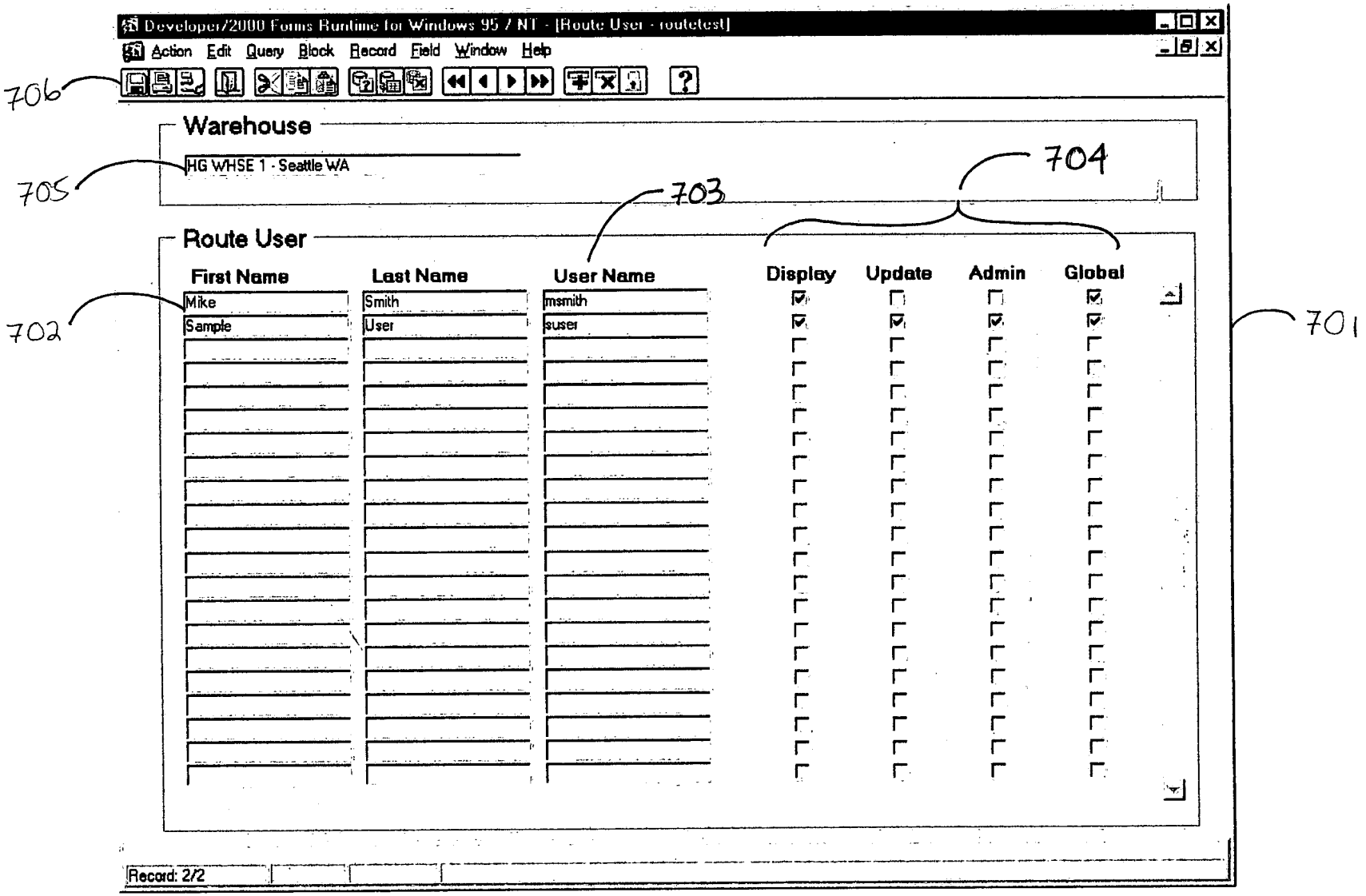
Developer/2000 Forms Runtime for Windows 95 / NT - [Route User - routetest]
Action Edit Query Block Record Field Window Help
706
Warehouse
705
HG WHSE 1 - Seattle WA
704
703
Route User
First Name
Last Name
User Name
Display
Update
Admin
Global
702
Mike
Smith
msmith
Sample
User
suser
701
Record: 2/2

FIG. 7

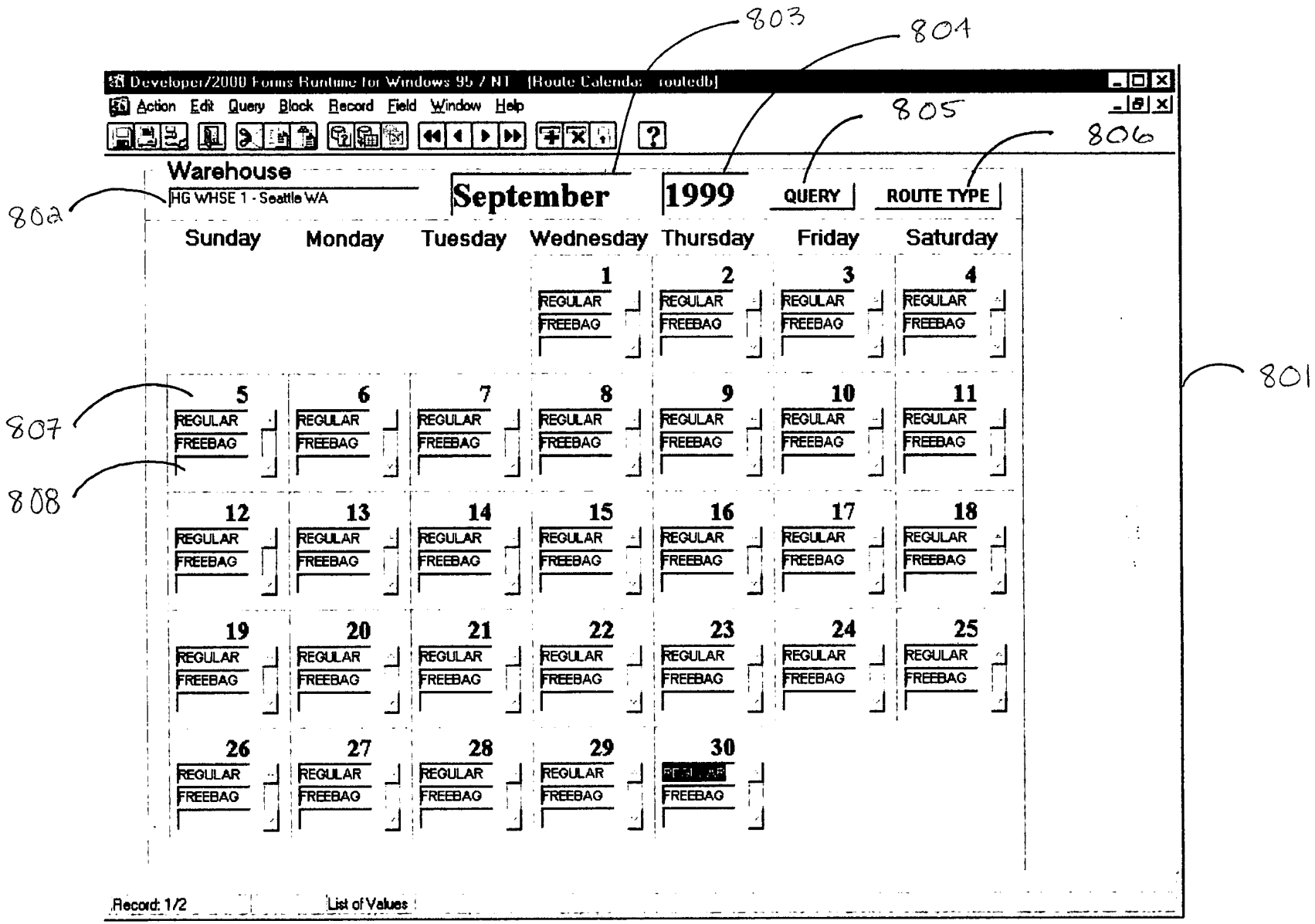
803
801
805
806
Developer/2000 Forms Runtime for Windows 95 / NT [Route Calenda: routedb]
Action Edit Query Block Record Field Window Help
Warehouse
HG WHSE 1 - Seattle WA
802
September
1999
QUERY
ROUTE TYPE
Sunday Monday Tuesday Wednesday Thursday Friday Saturday
REGULAR
FREEBAG
807
808
Record: 1/2
List of Values

FIG. 8

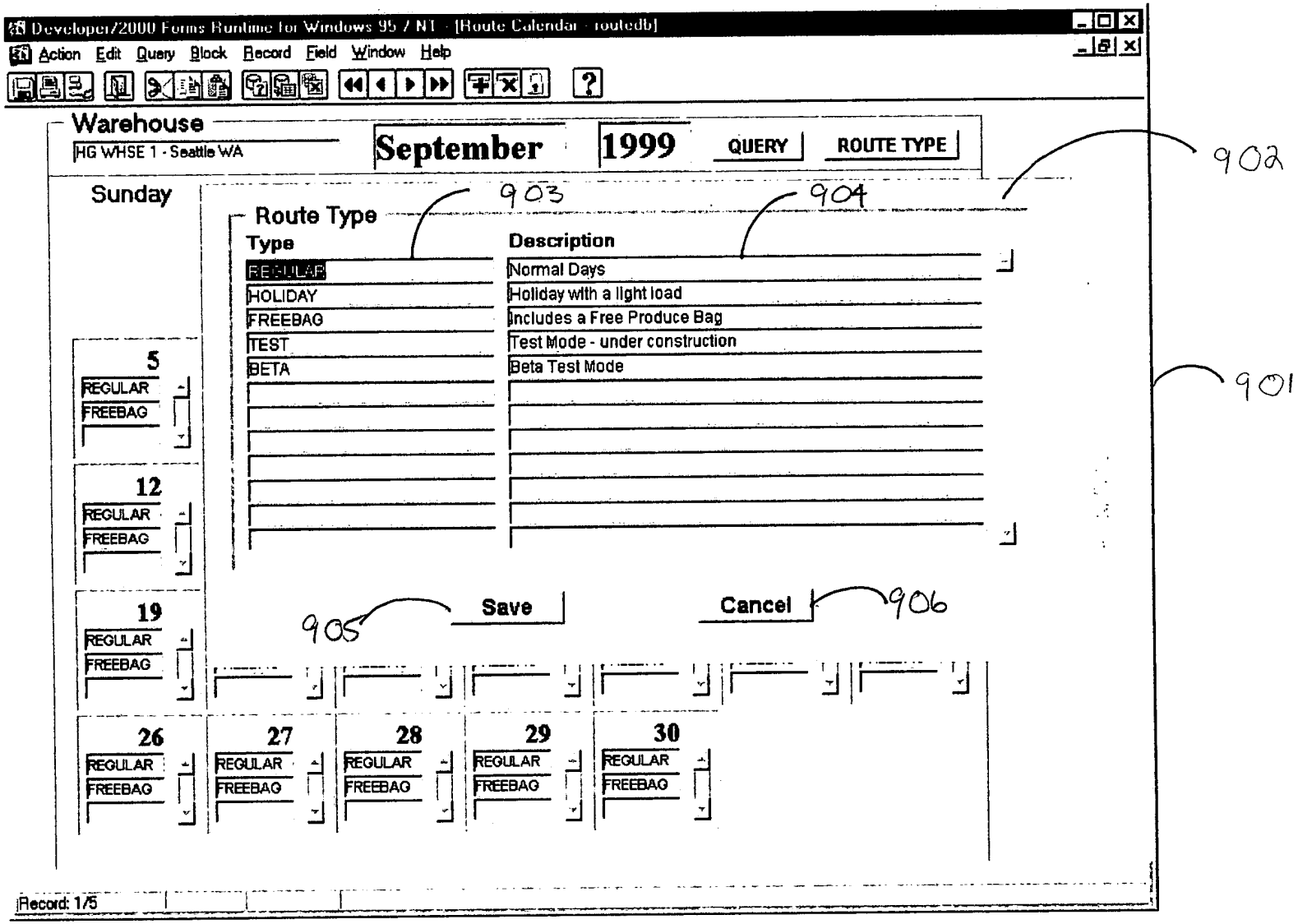
Developer/2000 Forms Runtime for Windows 95 / NT - [Route Calendar - routedb]
Action Edit Query Block Record Field Window Help
Warehouse
HG WHSE 1 - Seattle WA
September
1999
QUERY
ROUTE TYPE
902
Sunday
Route Type
903
904
Type
Description
REGULAR
Normal Days
HOLIDAY
Holiday with a light load
FREEBAG
Includes a Free Produce Bag
TEST
Test Mode - under construction
BETA
Beta Test Mode
901
5
REGULAR
FREEBAG
12
REGULAR
FREEBAG
19
REGULAR
FREEBAG
905
Save
Cancel
906
26
REGULAR
FREEBAG
27
REGULAR
FREEBAG
28
REGULAR
FREEBAG
29
REGULAR
FREEBAG
30
REGULAR
FREEBAG
Record: 1/5

FIG. 9

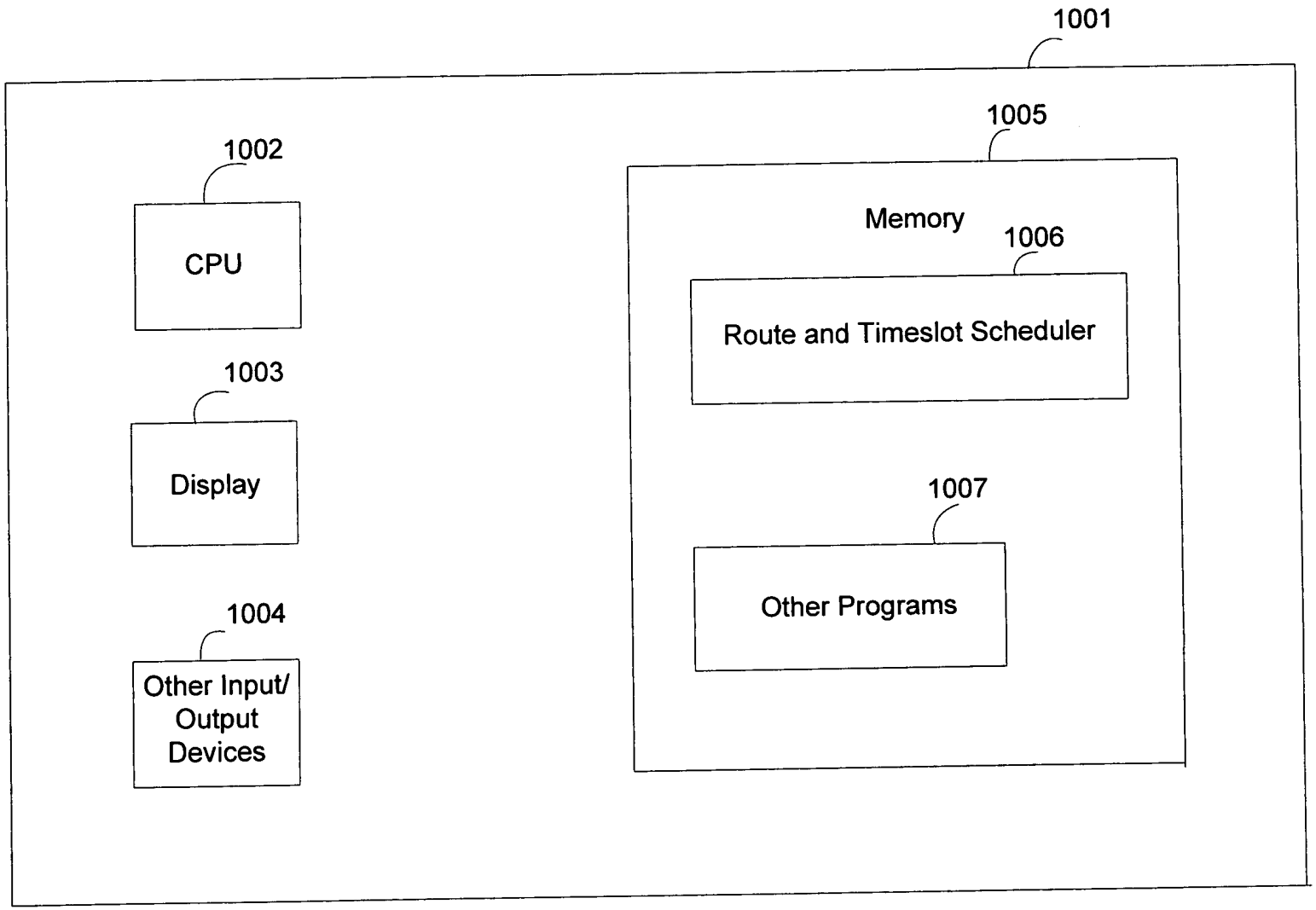
1001
1002
CPU
1003
Display
1004
Other Input/
Output
Devices
1005
Memory
1006
Route and Timeslot Scheduler
1007
Other Programs

Fig. 10

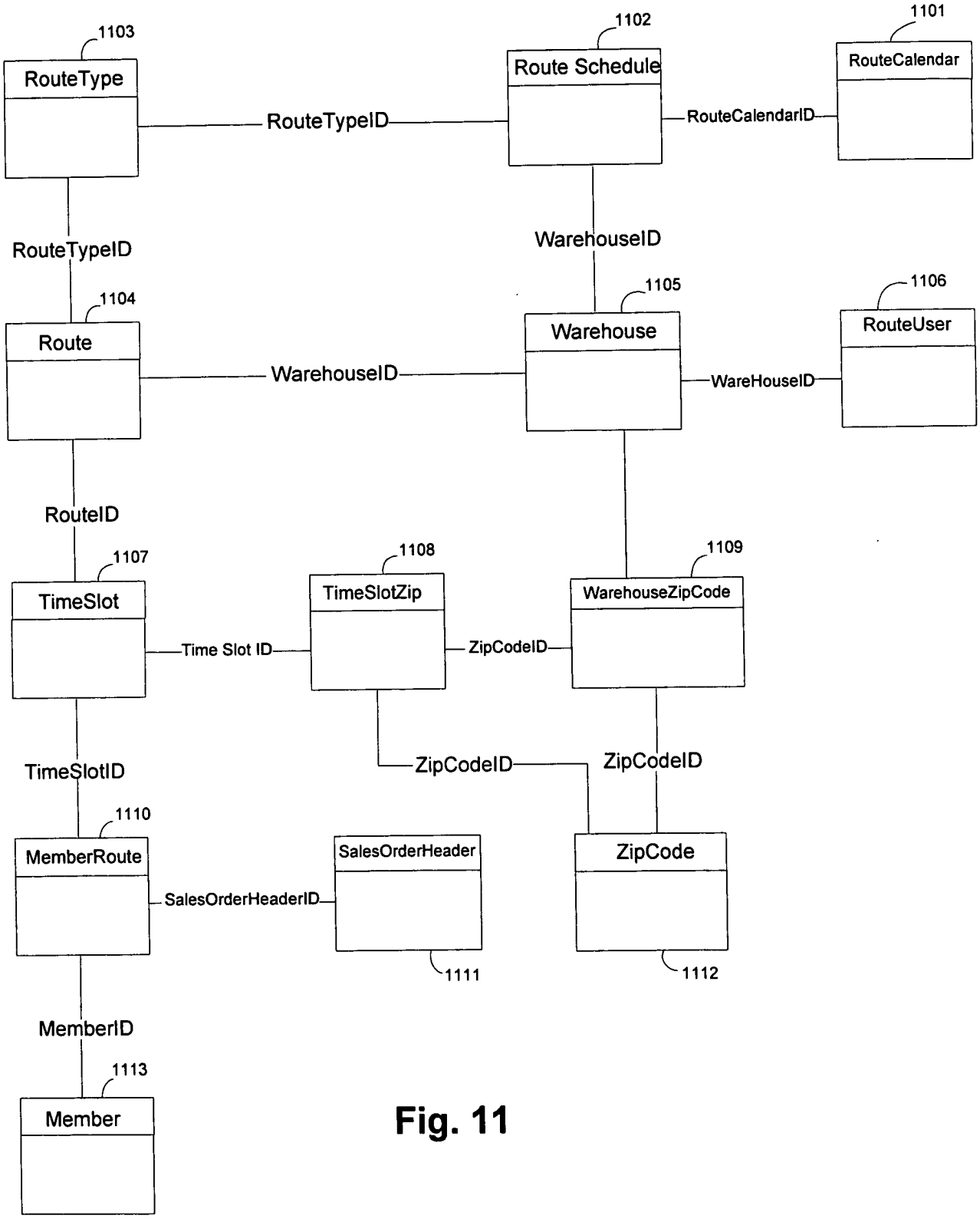
1103
RouteType
RouteTypeID
1102
Route Schedule
RouteCalendarID
1101
RouteCalendar
RouteTypeID
WarehouseID
1104
Route
WarehouseID
1105
Warehouse
WareHouseID
1106
RouteUser
RouteID
1107
TimeSlot
Time Slot ID
1108
TimeSlotZip
ZipCodeID
1109
WarehouseZipCode
TimeSlotID
ZipCodeID
ZipCodeID
1110
MemberRoute
SalesOrderHeaderID
SalesOrderHeader
1111
ZipCode
1112
MemberID
1113
Member

Fig. 11

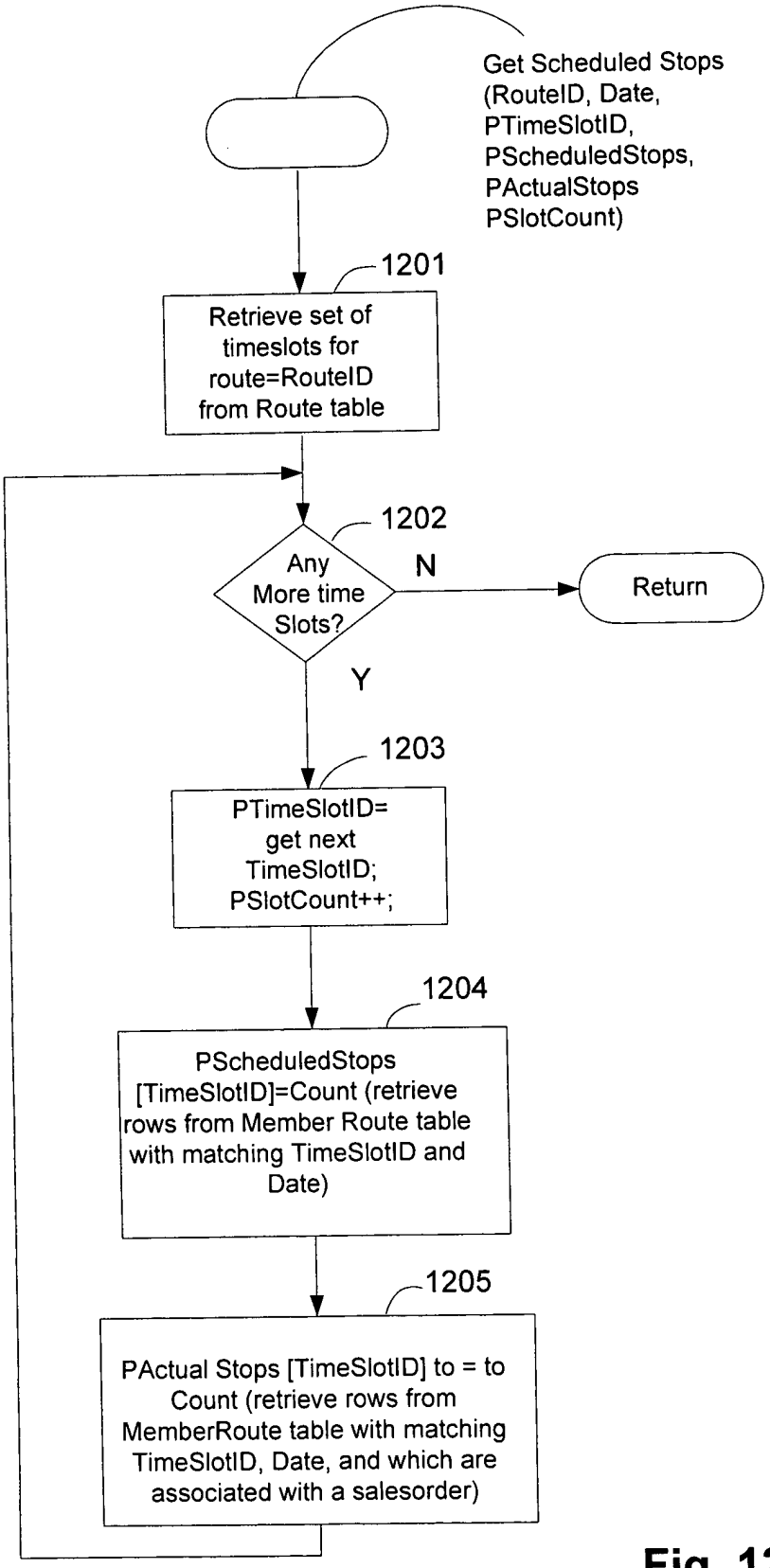
Get Scheduled Stops
(RouteID, Date,
PTimeSlotID,
PScheduledStops,
PActualStops
PSlotCount)
1201
Retrieve set of
timeslots for
route=RouteID
from Route table
1202
Any
More time
Slots?
N
Return
Y
1203
PTimeSlotID=
get next
TimeSlotID;
PSlotCount++;
1204
PScheduledStops
[TimeSlotID]=Count (retrieve
rows from Member Route table
with matching TimeSlotID and
Date)
1205
PActual Stops [TimeSlotID] to = to
Count (retrieve rows from
MemberRoute table with matching
TimeSlotID, Date, and which are
associated with a salesorder)

Fig. 12

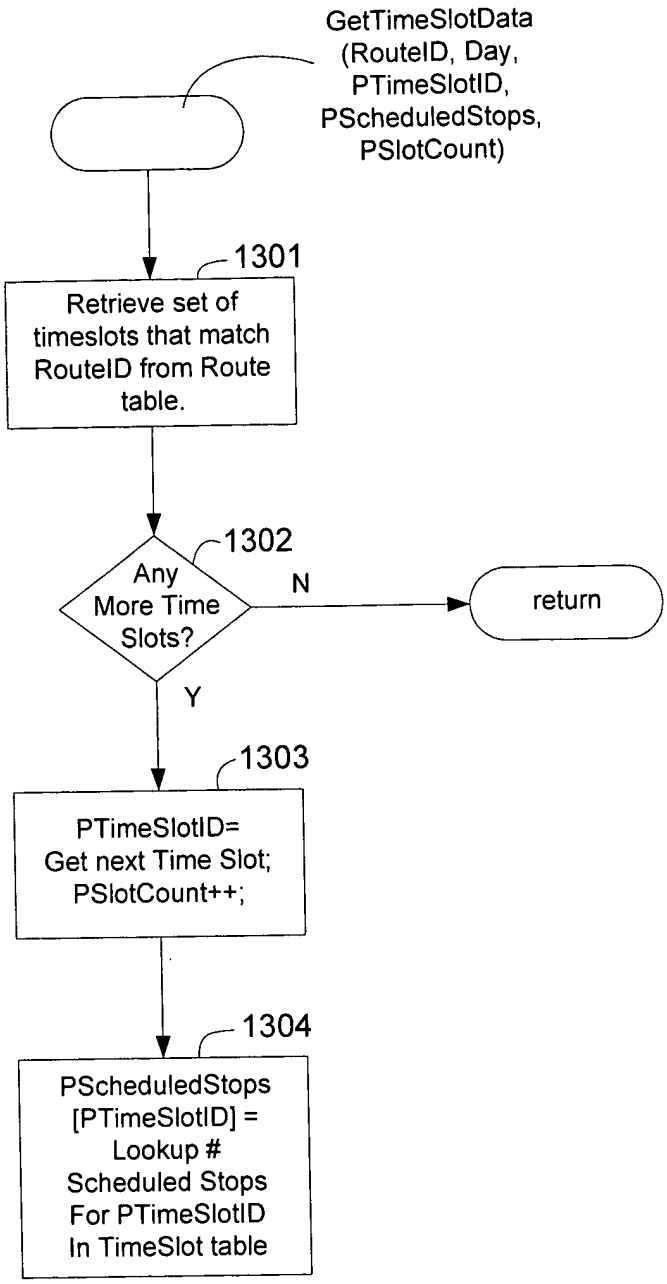
GetTimeSlotData
(RouteID, Day,
PTimeSlotID,
PScheduledStops,
PSlotCount)
1301
Retrieve set of timeslots that match RouteID from Route table.
1302
Any More Time Slots?
N
return
Y
1303
PTimeSlotID=
Get next Time Slot;
PSlotCount++;
1304
PScheduledStops
[PTimeSlotID] =
Lookup #
Scheduled Stops
For PTimeSlotID
In TimeSlot table

Fig. 13

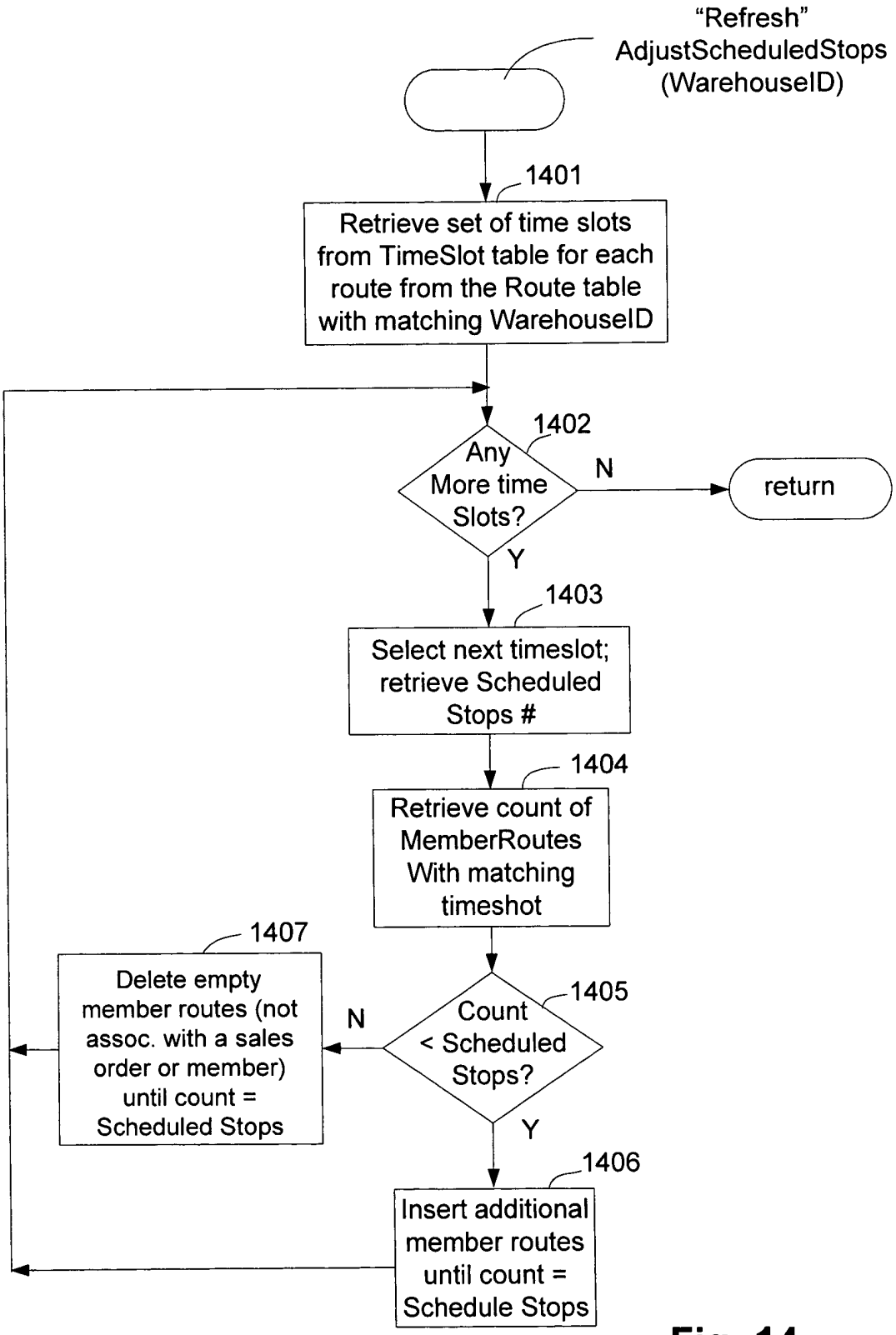
"Refresh"
AdjustScheduledStops
(WarehouseID)
1401
Retrieve set of time slots from TimeSlot table for each route from the Route table with matching WarehouseID
1402
Any More time Slots?
N
return
Y
1403
Select next timeslot; retrieve Scheduled Stops #
1404
Retrieve count of MemberRoutes With matching timeshot
1405
Count < Scheduled Stops?
N
1407
Delete empty member routes (not assoc. with a sales order or member) until count = Scheduled Stops
Y
1406
Insert additional member routes until count = Schedule Stops

Fig. 14

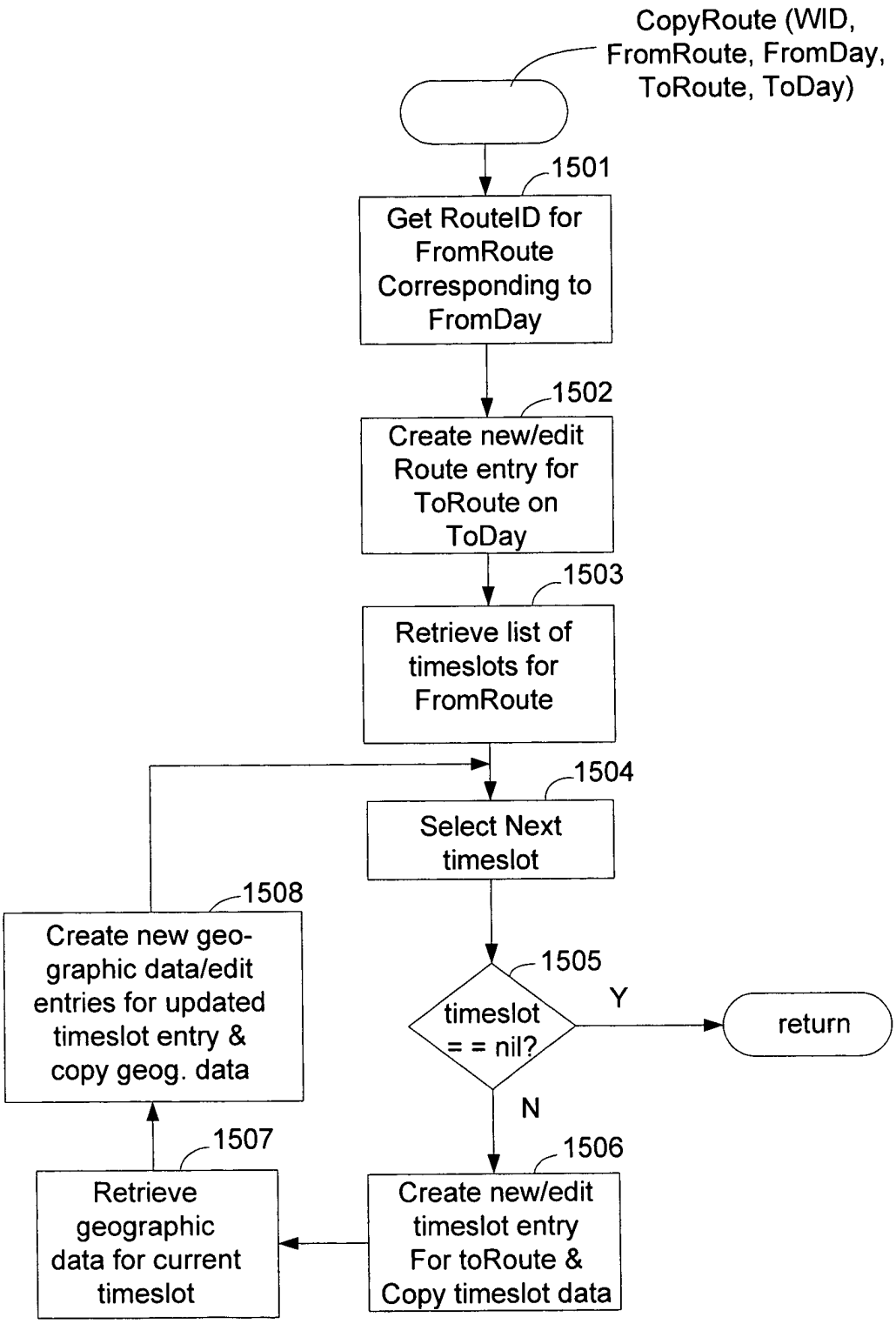
CopyRoute (WID, FromRoute, FromDay, ToRoute, ToDay)
1501
Get RouteID for FromRoute Corresponding to FromDay
1502
Create new/edit Route entry for ToRoute on ToDay
1503
Retrieve list of timeslots for FromRoute
1504
Select Next timeslot
1505
timeslot = = nil?
Y
return
N
1506
Create new/edit timeslot entry For toRoute & Copy timeslot data
1507
Retrieve geographic data for current timeslot
1508
Create new geo-graphic data/edit entries for updated timeslot entry & copy geog. data

Fig. 15

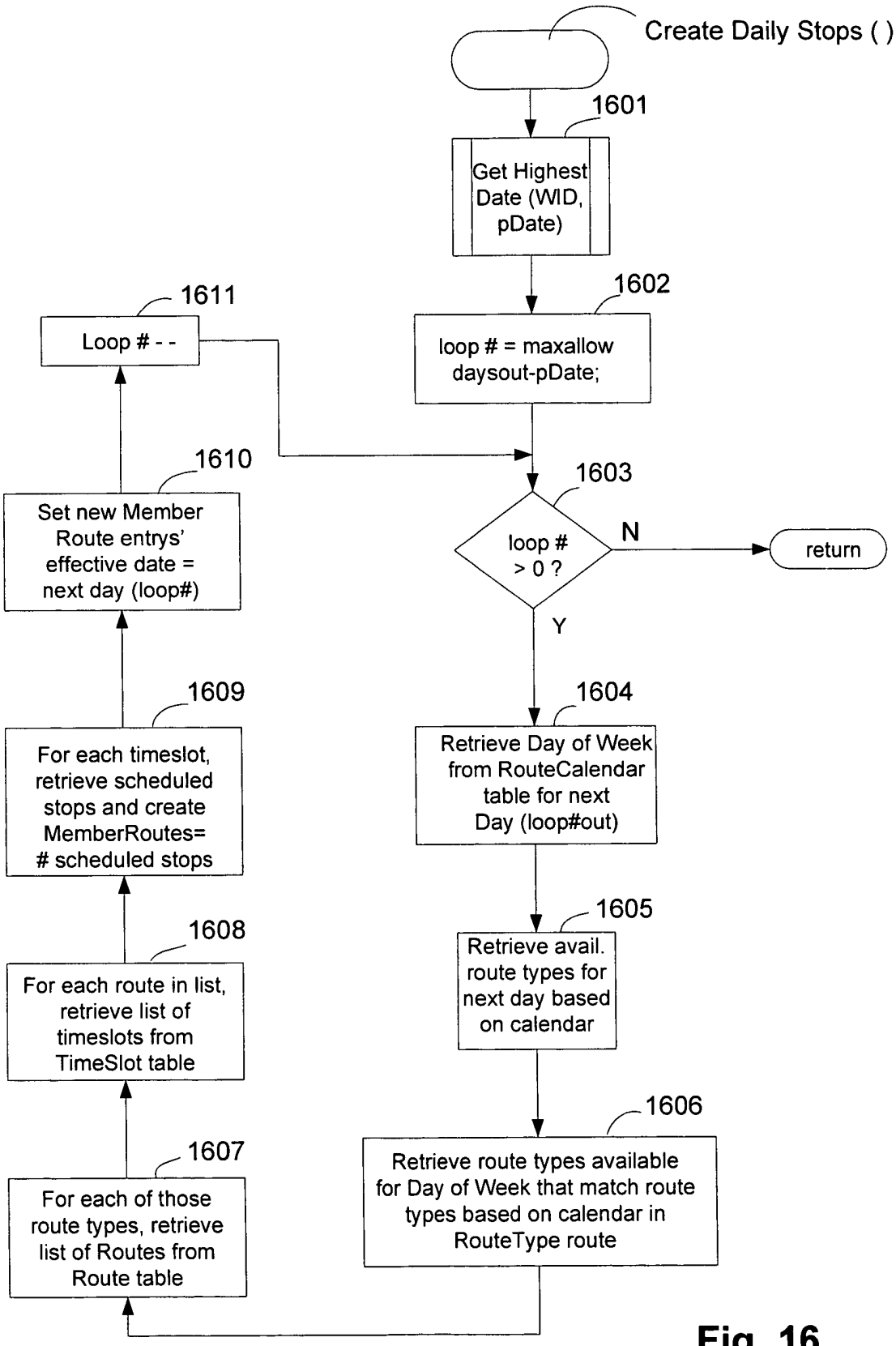
Create Daily Stops ( )
1601
Get Highest Date (WID, pDate)
1602
loop # = maxallow daysout-pDate;
1603
loop # > 0 ?
N
return
Y
1604
Retrieve Day of Week from RouteCalendar table for next Day (loop#out)
1605
Retrieve avail. route types for next day based on calendar
1606
Retrieve route types available for Day of Week that match route types based on calendar in RouteType route
1607
For each of those route types, retrieve list of Routes from Route table
1608
For each route in list, retrieve list of timeslots from TimeSlot table
1609
For each timeslot, retrieve scheduled stops and create MemberRoutes= # scheduled stops
1610
Set new Member Route entrys' effective date = next day (loop#)
1611
Loop # - -

Fig. 16

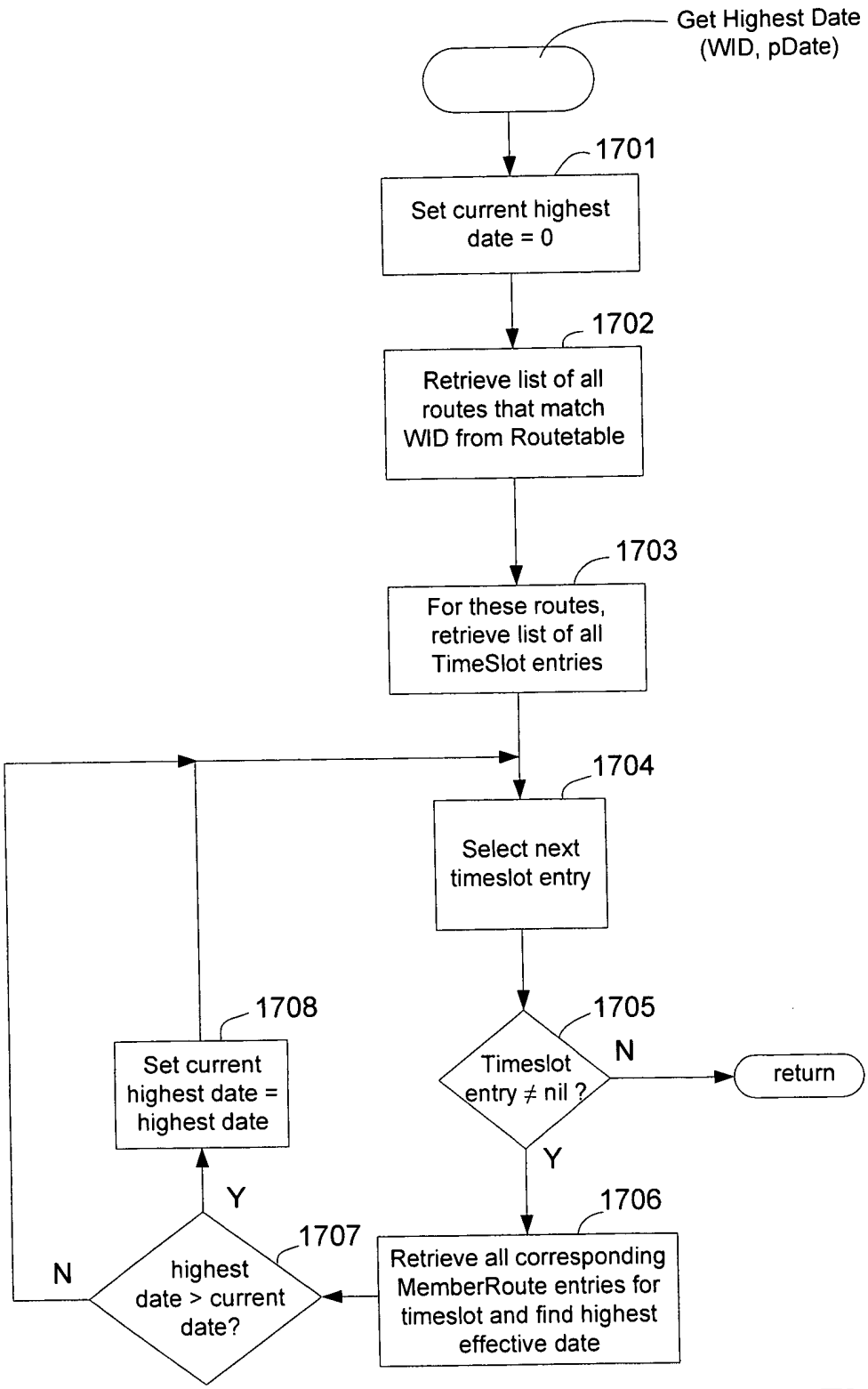
Get Highest Date
(WID, pDate)
1701
Set current highest date = 0
1702
Retrieve list of all routes that match WID from Routetable
1703
For these routes, retrieve list of all TimeSlot entries
1704
Select next timeslot entry
1705
Timeslot entry ≠ nil ?
N
return
Y
1706
Retrieve all corresponding MemberRoute entries for timeslot and find highest effective date
1707
highest date > current date?
N
Y
1708
Set current highest date = highest date

Fig. 17